



APPENDIX

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Appendix A: Glossary

APPENDIX A: GLOSSARY OF TERMS

Active Management: the goals of the native community management area would be in part or mostly achieved through active manipulation of the vegetation. Although each native community management area has different goals and objectives, most of the goals are to develop the composition and characteristics of old-growth forest. In many native community areas, the tree composition is dominated by a few species and the diversity can be enhanced through active management (often times timber harvest) techniques. Forest users can expect some activity during the life of the master plan, but many portions of the area would age naturally.

Adaptive Management: A dynamic approach to forest management in which the effects of treatments and decisions are continually monitored and used, along with research results, to modify management on a continuing basis to ensure that objectives are being met.

Basal Area: The basal area of a tree is usually defined as the cross-sectional area at breast height in square feet.

Biological Diversity: The variety and abundance of species, their genetic composition, and the communities, ecosystems and landscapes in which they occur. Biological diversity also refers to the variety of ecological structures, functions, and processes at any of these levels.

Ecological Reference Sites: Ecological reference areas are places on the landscape managed primarily for their ecological values. Management considerations for production of forest products, wildlife habitat for game species, recreational activities, and other natural resource objectives are secondary, though some may be compatible with benchmark management. Benchmarks provide a framework for improving our understanding of ecological systems and changes occurring within them, as well as for evaluating the consequences of management actions and the impacts, past and present, of humans on the landscape. They can also provide historical ecological context to bridge the past with the present.

Community Restoration: recognizes that communities, species, structural features, microhabitats, and natural processes that are now diminished or absent from the present landscape have a valuable role to play in maintaining native ecosystems. (Biotic Inventory and Analysis of the NH-AL State Forest, 1999) Under some definitions, community restoration means moving the current composition and structure of a plant community to a composition and structure

that more closely resembles that of the pre-settlement vegetation. (Community Restoration and Old Growth on the NH-AL State Forest Assessment, 2001)

Drumlins: Were formed by erosion and deposition of materials beneath the glacier.

Eskers: Are ridges composed of sand and gravel that were deposited by streams which flowed beneath the glacier.

Extended Rotation Stands: can be either even or uneven aged. They are managed well beyond the economic rotation to capture ecological benefits associated with mature forests. These stands are carried beyond their normal economic rotation age and are harvested before reaching pathological decline.

Forest Cover Type: A category of forest usually defined by its vegetation, particularly its dominant vegetation as based on percentage cover of trees.

Focus Sites: In this document, Focus Sites refer to designated sites that would be managed for old growth characteristics or other ecological features such as pine barrens in the uplands and protection of wetlands and water resources in the lowlands.

Invasive Species: These species have the ability to invade natural systems and proliferate, often dominating a community to the detriment and sometimes the exclusion of native species. Invasive species can alter natural ecological processes by reducing the interactions of many species to the interaction of only a few species.

Managed Old Growth: stands are differentiated from old growth reserves by designated management commitments. The primary management goal is the long-term development and maintenance of old growth characteristics within environments where limited but active land management including logging is allowed. Practices which could be considered include insect control, salvage logging, prescribed fire, and prescribed logging.

Appendix A: Glossary

Miscellaneous Old Forest: stands are biologically mature, but long term management goals and commitments are uncertain. Many forest stands beyond normal rotation age conform to this description, especially on non-industrial private lands.

Moraines: Ridges of sediment that accumulated along the margin of the glacier as the glacier stood in place for a long period of time.

Old Growth Reserve: stands are dominated by relatively old trees, which are older than their normal economic rotation age. The actual qualifying stand age will vary, depending on species (forest type) and site capability. The primary management goal is the long-term development and maintenance of old growth ecological attributes within a minimally manipulated environment. Active management is very limited. Some management and use practices that could be considered include: fire management, pest control, recreation and research.

Outwash plains: Are formed by meltwater rivers that flowed beyond the margin of the glacier and deposited sandy and gravelly sediment. When the ice melted, the sand and gravel collapsed to form an irregular surface that typically contains many closed depressions known as kettles.

Passive management means the goals of the native community management area are achieved primarily without any direct action. Nature is allowed to determine the composition and structure of the area. For example, patches of large woody debris and the accompanying root boles (tip-up mounds) that are characteristic of old-growth structure are best achieved through natural processes. Passive management, however, does not mean a totally hands off approach. Some actions are required by law, such as wildfire suppression, consideration of actions when severe insect and disease outbreaks affects trees, and hazard management of trees along trails and roads. Other actions, such as removal of invasive exotics species, are necessary to maintain the ecological integrity of the site.

Relict Forests: are stands that appear to have never been manipulated or disturbed by humans of European descent. Some presettlement forest ecosystem conditions have been perpetuated. Ancient forest, a sub-category, is relict forest with the presence of some old, biologically mature trees. Very few relict forests still exist in Wisconsin.

Sustainable Forestry: The practice of managing dynamic forest ecosystems to provide ecological, economic, social, and cultural benefits for present and future generations.

Type 1 Recreational Use Setting: Objective of this setting is to provide a remote, wild area where the recreational user has opportunities to experience solitude, challenge, independence and self-reliance.

Type 2 Recreational Use Setting: Objective of this setting is to provide a remote or somewhat remote area with little development and a predominantly natural-appearing environment offering opportunities for solitude and primitive, non-motorized recreation.

Type 3 Recreational Use Setting: Objective of this setting is to provide readily accessible areas with modest recreational facilities offering opportunities at different times and places for a variety of dispersed recreational uses and experiences.

Type 4 Recreational Use Setting: Objective of this setting is to provide areas offering opportunities for intensive recreational use activities and expectations. Facilities when present, may provide a relatively high level of user comfort, convenience and environmental protection.

Appendix B: References

REFERENCES

- Alban, D.H. and D.A. Perala. 1990. Impact of aspen timber harvesting on soils. In, Sustained productivity of forest soils: 7 th North American forest soils conference, July 24-28, 1988, University of British Columbia, Vancouver, BC. Gessel, S.P., D.S. Lacate, G.F. Weetman, and R.F. Powers, Eds. Pp. 377-391.
- Alban, D.H. and D.A. Perala. 1990. Ecosystem carbon following aspen harvest in the Upper Great Lakes. In R. D. Adams, Ed. Aspen symposium '89 proceedings, 1989 July 25-27, Duluth, MN. General Technical Report NC-140. St. Paul, MN: U.S. Dept. of Agriculture, Forest Service, North Central Forest Experiment Station Pp. 123-131
- Boone, T. Department of Natural Resources. June 2003. Personal Communication.
- Brandt, M. Department of Natural Resources. 2003. Personal Communication.
- Epstein, E., W. Smith, J. Dobberpuhl, and A. Galvin. 1999. Biotic Inventory of the Northern Highland-American Legion State Forest: A Baseline Inventory (1992-1996) in Preparation for State Forest Master Planning. Wisconsin's Natural Heritage Inventory Program. Wisconsin Department of Natural Resources.
- Hoffman, R. Department of Natural Resources – Endangered Resources. 2003. Personal Communication.
- Leath, D. 2004. Personal communication.
- Marcouiller, D., E. Olsen, J. Prey. 2002. State Parks and Their Gateway Communities, Development and Recreation Planning Issues in Wisconsin.
- Mladenoff, D.J., T.A. Sickley, R.G. Haight, and A. P. Wydeven. 1995. A Regional Landscape Analysis and Prediction of Favorable Gray Wolf Habitat in the Northern Great Lakes Region. *Conservation Biology*, 9(2): 279-294.
- Watkins, T., T. Mace, and D. Marcouiller. 1999. *Socioeconomics for the NH-AL State Forest Region*. Wisconsin's Northern State Forest Assessments. Wisconsin Department of Natural Resources. PUB-FR-138a 99.
- Wisconsin Administrative Code, Chapters NR44: Master Planning for Department Properties and NR 150: Environmental Analysis and Review Procedures for Department Actions
<http://www.legis.state.wi.us/rsb/code/>
- Wisconsin Department of Natural Resources. 1995. Wisconsin's Forestry Best Management Practices for Water Quality. Publication # FR093.
- Wisconsin Department of Natural Resources, Division of Forestry. 1998-2004. Northern Highland – American Legion State Forest. Progress Reports # 2-9, 11, 13-14.
- Wisconsin Department of Natural Resources. 2002. Northern Highland-American Legion State Forest Alternatives for the Master Plan Revision. Progress Report #10.
- Wisconsin Department of Natural Resources. 2003. Northern Highland-American Legion State Forest Preferred Alternative. Progress Report #12.
- Wisconsin Department of Natural Resources. 1999. Wisconsin's forestry best management practices for water quality – the 1995-1997 BMP monitoring report. PUB-FR-145-99. Wisconsin Department of Natural Resources, Bureau of Forestry, Madison, WI.
- Wisconsin Department of Natural Resources. 2001. *Wisconsin's Northern State Forest Assessments: Recreational Supply and Demand*. PUB-FR-137 2001.
- Wisconsin Department of Natural Resources. 2001. Wisconsin's northern state forest assessments: community restoration and old growth on the Northern Highland-American Legion State Forest. PUB-FR-139b 2001. Wisconsin Department of Natural Resources, Madison, WI.
- Wisconsin Department of Natural Resources. 2002. Silviculture and forest aesthetics handbook. Handbook 2431.5. Wisconsin Department of Natural Resources, Madison, WI. www.dnr.state.wi.us/org/land/forestry/publications Wisconsin State Statutes 66.04047, 23.22, .23.235 <http://www.legis.state.wi.us/./rsb/stats.html>
- Wydeven, A.P. and J. E. Wiedenhoeft. 2002. Wisconsin Endangered Resources Report #121. Status of the Timber Wolf in Wisconsin. Performance Report 1 July 2001 through 30 June 2002. Wisconsin Department of Natural Resources..

Appendix C: Ecological Attributes

APPENDIX C: ECOLOGICAL ATTRIBUTES OF THE NORTHERN HIGHLAND-AMERICAN LEGION STATE FOREST

NH-AL Ecological Attributes

NH-AL ECOLOGICAL ATTRIBUTES	Forest Production	Habitat	Native Community Passive	Native Community Active	Recreation	Scenic	Wild Resources	Admin
Large Amounts Coarse Woody Debris	No	No	Yes	Most	Some	Some	Yes	Some
Large Amounts of Standing Dead	No	No	Yes	Most	Some	Some	Yes	Some
Diverse Fungal and Lichen Communities	Moderate	Low	High	Moderate	Moderate	Moderate	High	Low
Individual Tree Fall Gaps	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Diversity of Disturbance Patch Sizes that Cross Stand Boundaries	No	No	Yes	Yes	No	No	Yes	No
Catastrophic Fire Regenerates Stands	No	No	No	No	No	No	No	No
Disturbance Regeneration of Stands	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Disturbance Regeneration of Stands While Retaining Numerous Snags	No	No	No	Yes	No	No	No	No
Savanna and Barrens Attributes	No	No	No	Yes	No	No	No	No
Patches Missed by Disturbance Events that Develop Old-Growth	No	No	Yes	Yes	No	No	No	No
Large Tree Diameter	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Deep Furrowed and Plated Bark	Some	No	Yes	Most	Some	Some	Yes	Some
Tip-up Mounds	Yes	Few	Yes	Yes	Some	Some	Yes	Few

Appendix D: Species of Special Concern & Threatened & Endangered
**APPENDIX D: SPECIES OF SPECIAL CONCERN, WISCONSIN STATE
THREATENED AND ENDANGERED SPECIES WITHIN THE NORTHERN
HIGHLAND-AMERICAN LEGION STATE FOREST**

Scientific Name	Common Name	Status	Group
<i>Sorex palustris</i>	Water Shrew	Special Concern	Mammal
<i>Accipiter gentiles</i>	Northern Goshawk	Special Concern	Bird
<i>Ammodramus leconteii</i>	Le Conte's Sparrow	Special Concern	Bird
<i>Anas rubripes</i>	American Black Duck	Special Concern	Bird
<i>Ammodramus nelsoni</i>	Sharp-tailed Sparrow	Special Concern	Bird
<i>Asio otus</i>	Long-eared Owl	Special Concern	Bird
<i>Buteo lineatus</i>	Red-shouldered Hawk	State Threatened	Bird
<i>Botaurus lentiginosus</i>	American Bittern	Special Concern	Bird
<i>Carduelis pinus</i>	Pine Siskin	Special Concern	Bird
<i>Catharus ustulatus</i>	Swainson's Thrush	Special Concern	Bird
<i>Chlidonias niger</i>	Black Tern	Special Concern	Bird
<i>Circus cyaneus</i>	Northern Harrier	Special Concern	Bird
<i>Coturnicops noveboracensis</i>	Yellow Rail	State Threatened	Bird
<i>Dendroica caerulescens</i>	Black-throated Blue Warbler	Special Concern	Bird
<i>Dendroica tigrina</i>	Cape May Warbler	Special Concern	Bird
<i>Dendroica cerulea</i>	Cerulean Warbler	State Threatened	Bird
<i>Empidonax flaviventris</i>	Yellow-bellied Flycatcher	Special Concern	Bird
<i>Falci pennis Canadensis</i>	Spruce Grouse	State Threatened	Bird
<i>Falco columbarius</i>	Merlin	Special Concern	Bird
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Special Concern, Federally Threatened	Bird
<i>Pandion haliaetus</i>	Osprey	State Threatened	Bird
<i>Perisoreus canadensis</i>	Gray Jay	Special Concern	Bird
<i>Picoides arcticus</i>	Black-backed Woodpecker	Special Concern	Bird
<i>Poecile hudsonica</i>	Boreal Chickadee	Special Concern	Bird
<i>Oporornis agilis</i>	Connecticut Warbler	Special Concern	Bird
<i>Coregonus artedii</i>	Lake Herring	Special Concern	Fish
<i>Moxostoma valenciennesi</i>	Greater Redhorse	State Threatened	Fish
<i>Notropis anogenus</i>	Pugnose shiner	State Threatened	Fish
<i>Etheostoma microperca</i>	Least darter	Special Concern	Fish
<i>Fundulus diaphranus</i>	Banded Killifish	Special Concern	Fish
<i>Lepomis megalotis</i>	Longear Sunfish	State Threatened	Fish
<i>Clemmys insculpta</i>	Wood Turtle	State Threatened	Amphibian
<i>Hemidactylium scutatum</i>	Four-toed Salamander	Special Concern	Amphibian
<i>Diadophis punctatus edwardsii</i>	Northern ringneck snake	Special Concern	Reptile
<i>Rana catesbeiana</i>	Bullfrog	Special Concern	Reptile
<i>Alasmidonta marginata</i>	Elktoe	Special Concern	Mussel
<i>Pleurobema sintoxia</i>	Round Pigtoe	Special Concern	Mussel
<i>Pyganodon cataracta</i>	Eastern Floater	Special Concern	Mussel
<i>Aeshna eremite</i>	Lake Darner	Special Concern	Dragonfly
<i>Aeshna tuberculifera</i>	Black-tipped darner	Special Concern	Dragonfly
<i>Coenagrion interrogatum</i>	Subarctic Bluett	Special Concern	Dragonfly
<i>Gomphurus lineatifrons</i>	Splendid Clubtail	Special Concern	Dragonfly
<i>Gomphurus ventricus</i>	Skillet Clubtail	Special Concern	Dragonfly
<i>Ischnura hastata</i>	Citrine Forktail	Special Concern	Dragonfly
<i>Nannothemis bella</i>	Elfin Skimmer	Special Concern	Dragonfly
<i>Nasiaeschna pentacantha</i>	Cyrano Darner	Special Concern	Dragonfly
<i>Somatochlora cingulata</i>	Lake Emerald	Special Concern	Dragonfly
<i>Somatochlora elongata</i>	Ski-tailed Emerald	Special Concern	Dragonfly
<i>Somatochlora forcipata</i>	Forcipate Emerald	Special Concern	Dragonfly
<i>Somatochlora kennedyi</i>	Kennedy's Emerald	Special Concern	Dragonfly

Appendix D: Species of Special Concern & Threatened & Endangered

Scientific Name	Common Name	Status	Group
<i>Stylurus scudderi</i>	Zebra clubtail	Special Concern	Dragonfly
<i>Williamsonia fletcheri</i>	Ebony Bog Hunder	Special Concern	Dragonfly
<i>Boloria frigga</i>	Frigga Fritillary	Special Concern	Butterfly
<i>Boloria eunomia</i>	Bog Fritillary	Special Concern	Butterfly
<i>Lycaena epixanthe</i>	Bog Copper	Special Concern	Butterfly
<i>Banksiola dossuaria</i>	A Giant Casemaker Caddisfly	Special Concern	Caddisfly
<i>Isoperla richardsoni</i>	A Perlodid Stonefly	Special Concern	Stonefly
<i>Caenis youngi</i>	A Small Square-gilled Mayfly	Special Concern	Mayfly
<i>Dubiraphia bivattata</i>	A Dubiraphian Riffle Beetle	Special Concern	Beetle
<i>Dubiraphia robusta</i>	Robust Dubiraphian Riffle Beetle	Special Concern	Beetle
<i>Lioporeus triangularis</i>	A Predaceous Diving Beetle	Special Concern	Beetle
<i>Neoscutopterus hornii</i>	A Predaceous Diving Beetle	Special Concern	Beetle
<i>Arethusa bulbosa</i>	Swamp Pink	Special Concern	Plant
<i>Calypso bulbosa</i>	Fairy Slipper	State Threatened	Plant
<i>Carex gynocrates</i>	Northern Bog Sedge	Special Concern	Plant
<i>Carex pallescens var neogaea</i>	Pale Sedge	Special Concern	Plant
<i>Carex vaginata</i>	Sheathed Sedge	Special Concern	Plant
<i>Carex gynocrates</i>	Northern Bog Sedge	Special Concern	Plant
<i>Carex lenticularis</i>	Shore Sedge	State Threatened	Plant
<i>Carex tenuiflora</i>	Sparse-flowered sedge	Special Concern	Plant
<i>Cirsium flodmanii</i>	Flodman Thistle	Special Concern	Plant
<i>Clematis occidentalis</i>	Purple Clematis	Special Concern	Plant
<i>Ceratophyllum echinatum</i>	Prickly Hornwark	Special Concern	Plant
<i>Goodyera oblongifolia</i>	Giant Rattlesnake-plantain	Special Concern	Plant
<i>Eleocharis olivacea</i>	Capitate Spikerush	Special Concern	Plant
<i>Epilobium palustre</i>	Marsh Willow-herb	Special Concern	Plant
<i>Equisetum variegatum</i>	Variegated Horsetail	Special Concern	Plant
<i>Juncus stygius</i>	Moor Rush	State Endangered	Plant
<i>Littorella Americana</i>	American Shore-grass	Special Concern	Plant
<i>Myriophyllum farwellii</i>	Farwell's Water-milfoil	Special Concern	Plant
<i>Osmorhiza chilensis</i>	Chilean Sweet Cicely	Special Concern	Plant
<i>Ophioglossum pusillum</i>	Adder's-tongue	Special Concern	Plant
<i>Platanthera dilatata</i>	Leafy White Orchis	Special Concern	Plant
<i>Platanthera hookeri</i>	Hooker Orchid	Special Concern	Plant
<i>Platanthera orbiculata</i>	Large Roundleaf Orchid	Special Concern	Plant
<i>Potamogeton confervoides</i>	Algae-like Pondweed	State Threatened	Plant
<i>Potamogeton diversifolius</i>	Water-thread Pondweed	Special Concern	Plant
<i>Potamogeton vaseyi</i>	Vasey's pondweed	Special Concern	Plant
<i>Ribes hudsonianum</i>	Northern Black Currant	Special Concern	Plant
<i>Triglochin maritime</i>	Common Bog Arrow-grass	Special Concern	Plant
<i>Utricularia purpurea</i>	Purple Bladderwort	Special Concern	Plant
<i>Utricularia pesupinata</i>	Northeastern Bladderwort	Special Concern	Plant
<i>Utricularia geminiscapa</i>	Hidden-fruited Bladderwort	Special Concern	Plant

Appendix E: State Natural Areas (SNAs)

STATE NATURAL AREAS

NH-AL MASTER PLAN DESIGNATION PROCESS FOR STATE NATURAL AREAS

Generally, natural areas are tracts of land or water harboring natural features that have escaped most human disturbance and that represent the diversity of Wisconsin's native landscape. They contain outstanding examples of native biotic communities and are often the last refuges in the state for rare and endangered plant and animal species. State Natural Areas may also contain exceptional geological or archaeological features. The finest of the state's natural areas are formally designated as State Natural Areas. The Wisconsin State Natural Areas Program oversees the establishment of SNAs and is advised by the Natural Areas Preservation Council. The stated goal of the program is to locate, establish, and preserve a system of SNAs that as nearly as possible represents the wealth and variety of Wisconsin's native landscape for education, research, and to secure the long-term protection of Wisconsin's biological diversity for future generations. SNAs are unique in state government's land protection efforts, because they can serve as stand alone properties or they can be designated on other properties, such as a State Forest. By designating SNAs within the boundary of the NH-AL State Forest, we are helping to accomplish two different, legislatively mandated Department goals. This arrangement makes abundant fiscal sense because the state does not have to seek out willing sellers of private lands to meet the goals of multiple Department programs. This avoids duplicating appraisal and negotiation work and provides dual use of land that is already in public ownership.

The process to establish a SNA begins with the evaluation of a site identified through field inventories conducted by DNR ecologists including the Biotic Inventory and Regional Analysis and the CROG (Community Restoration and Old Growth) Assessment. Assessments take into account a site's overall quality and diversity, extent of past disturbance, long-term viability, context within the greater landscape, and rarity of features on local and global scales. Sites are considered for potential SNA designation in one or more of the following categories:

- Outstanding natural community
- Critical habitat for rare species
- Ecological reference (benchmark) area
- Significant geological or archaeological feature
- Exceptional site for natural area research and education.

DESIGNATION PROCESS OF SNAS AND NH-AL MASTER PLAN DEVELOPMENT

STEP 1: ASSESSMENTS

STEP 2: PREFERRED ALTERNATIVE

STEP 3: PROPOSED MASTER PLAN

Biotic Inventory and

Community

Restoration

Old Growth

(CROG)

The highest rated biotic sites and those with potential for old growth characteristics become "focus sites"

Native community sites

Recreation Areas

Wild resource Areas

Administrative Areas

Step 1: Results from both the Community Restoration Old Growth (CROG) Assessment and the Biotic Inventory, which were conducted on the Northern Highland-American Legion State Forest within the last five years, were used to decide which areas would become focus sites with specific management prescriptions. The CROG Assessment is one of a series of assessments sponsored by the WDNR's Division of Forestry to comply with Chapter 28.04 of the Wisconsin State Statutes. The CROG report included a detailed inventory of forest stands and ages on the NH-AL. The CROG then used this inventory as a base and developed criteria to identify, rank, and map the community restoration and old growth potentials and opportunities on the NH-AL.

The data gathered for the Biotic Inventory identifies and evaluates the natural communities, significant plant and animal populations, and selected aquatic features and their associated biotic communities. This report emphasized important protection, management, and restoration opportunities, focusing on both unique and representative natural features of the NH-AL property and surrounding landscape. The master plan process proposed the sites for alternative management and informed the public that after the goals of the state forest were met, then many of these sites would also be considered as State Natural Areas in the Proposed Master Plan.

Step 2: Using both the Biotic Inventory and CROG Reports, the NH-AL Preferred Alternative took sites ranked high to moderate, or having a good potential for old growth management or other unique biological resources and created focus sites.

Appendix E: State Natural Areas (SNAs)

Step 3: After public review of the preferred alternative, these focus sites were then designated Native Community Management Areas, Wild Resources Areas, Recreation Areas, or Administrative Areas in the Draft Master Plan. The expanded team evaluated each native community site, wild resources area, recreation area, or administrative area for the attributes and management necessary to sustain it well into the future. After the management goals were developed, the team reassessed the boundaries to assure that each forest stand was in the correct management area. Experts worked together to ensure that these sites were also given consideration as potential State Natural Areas.

Step 4: The last step in the process involved the SNA program staff in the Bureau of Endangered Resources, the staff on the NH-AL and the Expanded NH-AL master plan team which incorporates experts from many different programs. After the SNA ecologists developed the list of SNA opportunities it was given to the expanded team to evaluate. The sites were compared the ecological gap analysis of the SNA system. Then, the sites were compared to the previously agreed management and recreation proposals for the site. Thus, if the plant and animal species that made up the site were good representatives of a native community, filled a gap in the SNA system, and the intended management and recreation for the native community did not conflict, it was considered a good candidate.

Once approved by the Natural Resources Board, sites are formally “designated” as SNAs and become part of the Wisconsin State Natural Areas system. Designation confers a significant level of recognition of these sites natural values through state statutes, administrative rules, and guidelines

IMPACT TO MASTER PLAN PROCESS

The process for selecting and designating SNAs is determined by cooperative efforts between two programs within the DNR: The Division of Forestry and the Bureau of Endangered Resources. The master planning process for State Forests requires that the goals set by the Division of Forestry be considered before the Bureau of Endangered Resources submits candidate sites for SNA designation. This is done so that all sites are evaluated for timber production, which is outlined as a Division of Forestry priority. As a result SNAs are considered overlays to Land Management Areas. The same piece of land can achieve the goals of two different Department programs. Management activities for each proposed SNA reflect the general management prescriptions proposed for the area in which the SNA is located. For example, an SNA located within an area managed for hemlock hardwoods, will follow the hemlock hardwoods management objective, rather than a separate SNA management plan. The exact same timber management would occur with or without SNA Designation.

LAND MANAGEMENT IMPACT BY NATIVE COMMUNITY MANAGEMENT AREAS AND DESIGNATION OF SNAS

Native Community Management Areas emphasize aspects of the ecosystem that provide the full range of forest types and age classes as promoted by the property goals. *Hemlock hardwood and northern hardwood forest* are comprised of relict old-growth stands and mature forest that can develop into old-growth relatively soon. *Mixed Forest* are comprised of various pine and hardwood species mixed with aspen and white birch with some these forests being actively managed for old forest characteristics and others allowing natural processes to determine the old-growth characteristics. Most *pine forests* are actively managed at some point to regenerate the composition, but many stands become very old before this activity occurs. The *Johnson Lake Barrens* would be actively managed for an open landscape with scattered trees and groves. *Peatlands/Wetlands* areas would be primarily managed by permitting natural processes to determine the succession and structure of the area. And finally, *Special aquatic areas* would be recognized for their diverse flora and fauna with species populations maintained. Most of the time State Natural Areas are a subset of the Native Community Areas, and often times provide an ecological reference for making adaptive management decision on the rest of the native community area. Sometimes the SNA boundaries and the native community boundaries will be the same.

SNA MANAGEMENT ACTIVITIES

State Natural Areas are not exclusively passive management. Within the past five years, over 200 SNAs all over Wisconsin have had some type of active management. Examples of management activities include exotic species removal, burning and fuel reduction, brushing, trail development, ditch filling and planting. Timber harvesting is not a primary focus of an SNA, but it is often necessary to achieve the desired ecological goals of a specific habitat. During the same five years, 19 commercial timber operations were conducted on SNAs to achieve the ecological goals of the site. Regardless of any designation, wildfires on state forests would be actively suppressed, safety measures would occur in developed areas and insect and disease outbreaks would be considered for control.

RECREATIONAL IMPACTS

Impacts would be minimal because the recreation opportunities for any given area were determined before consideration as an SNA. State Natural Areas are not appropriate for intensive recreation and such areas were automatically ruled out as potential sites. However, SNAs can accommodate low-impact activities such as hiking, bird watching, and nature study. Examples of existing facilities within proposed SNA

Appendix E: State Natural Areas (SNAs)

sites include remote and canoe campsites (limited facilities), hiking and cross-country ski trails, boat landings and ramps, snowmobile trails, and a paved bike trail. Most areas have walk-in or water access only. To comply with the SNA designation, existing trails may need to be rerouted to better protect sensitive areas, for safety reasons, for fire control access, or if it enters into a wetland area. Disabled access would be accommodated at sites with existing trails and roads.

BENEFITS FOR A PARTNERSHIP BETWEEN STATE FORESTS AND THE STATE NATURAL AREAS PROGRAM

The SNA program has standardized methods for conducting long-term monitoring of ecosystems and also has a network with a broad range of researchers, from aquatic biologists and botanists to zoologists, that can be encouraged to conduct research on the state forest to enhance our understanding of the NH-AL ecosystem. The experts in the Division of Forestry have experience in monitoring the trees and other plants, while SNA ecologists have expertise in monitoring aquatic flora and fauna, terrestrial invertebrates, fungi and lichens, ground layer plants, mammals, reptiles and amphibians, and birds. Together an exceptional collaborative monitoring program could be developed.

The SNA program can bring a broad range of educators together to assist in understanding and interpreting the ecology of the NH-AL.

The SNA Program can lend its expertise to help create ecological interpretive signs and trail guides for better understanding of the full range of biological diversity on the NH-AL.

The SNA Program can assist in conducting land management activities such as invasive exotic species control, brushing and conducting prescribed burns.

The Division of Forestry would not lose any of its management or decision-making authority, but gain the ability to provide a broader range of opportunities that would help fill its mission by collaborating with the SNA Program.

An outside forest certification audit of the State Forest Program concluded that cooperation between the Division of Forestry and the State Natural Areas Program was commendable. This cooperation should continue to maintain such a high rating by future auditors.

With a joint consideration, the same piece of land can achieve the goals of two different programs. If there were a lack of teamwork, the SNA Program would still pursue sites to fulfill its goals. Such a venture could duplicate an additional 21,000

acres of land with a cost of \$50,000,000 or more to the state of Wisconsin. Cooperation makes abundant fiscal sense.

PROPOSED STATE NATURAL AREAS

This is a list of proposed SNA sites on the NH-AL. Each of these sites either contain part of, or the entire boundary of a Native Community Area, Wild Resources Area, or Recreation Area. The number correlates to the site number on the Proposed SNA Sites map found in the appendix.

#1 Catherine Lake Hemlock-Hardwoods:

This site contains a relict old-growth stand of hemlock and yellow birch that are over 250-years old. The site would be managed as a Hemlock/Northern Hardwood Native Community Management Area. The older and least disturbed portions of the site encompassing 827-acres including 33 acres of water would be passively managed and designated the Catherine Lake Hemlock-Hardwoods SNA. The remainder of the site would be managed to promote the old-growth character of the site and look for opportunities to manage for a forest dominated by large trees and diverse forest structure.

CROG: 5A, 6A, 17AB

Biotic Inventory: 1

Draft Master Plan Area: 9

Native Community: Hemlock Hardwoods

#2 DuPage Lake Peatlands:

This site contains a large complex of wetland communities with patches of old-growth hemlock and white pine forest. The site (3,205 acres, including 230 acres of water) would be managed as a Peatland/Wetland Native Community Management Area. The vast peatlands, stunted spruce, old-growth relict forest and inaccessible nature of the site lends itself to passive management. Most of the areas south of J and a connecting strip to an ancient forest relict south of Cedar Lake Road would be managed passively and constitute the DuPage Lake Peatlands SNA. The remainder of the site would be actively managed for old-growth hemlock, northern hardwood, and white pine characteristics.

Biotic Inventory: 2, 3

CROG: 18AB

Draft Master Plan Area: 10

Native Community: Peatland Wetland (01)

#3 Toy Lake Swamp:

This site contains a large wetland complex of hardwood swamp, white cedar swamp, and alder thicket. Within this swamp (2,301 acres, including 124 acres of water) are islands of mature spruce/fir and hemlock/hardwoods. The site would be managed as a Peatland/Wetland Native Community Management Area. Most of the area would be passively

Appendix E: State Natural Areas (SNAs)

managed, with boundary areas and accessible aspen and hardwoods open for active management. The passive management zone would also be designated Toy Lake Swamp SNA.

Biotic Inventory: 8
Draft Master Plan Area: 10
Native Community: Peatland Wetland

#4 Frog Lake and Pines:

This existing 192-acre site is in the current Manitowish River Wilderness Area and the proposed Manitowish River Wild Resources Area. The existing SNA would be expanded to 1,176 acres, including 72 acres of water and cover the largest and oldest stands of pine. Because it is a wild resources area, all management will be passive.

Biotic Inventory: 5
CROG: 1A
Draft Master Plan Area: 17
Native Community: Manitowish River Wild Resource Area

#5 Papoose Creek Pines:

This 533-acre site would be managed as a Red Pine and White Pine Native Community Management Area. A combination of many active management techniques would be used to achieve the goals of an old-growth red pine/white pine forest. The western portion now mostly in plantation pine would be managed through timber harvest to mimic the structure of a naturally regenerated pine forest. The eastern and southern portions, which are mostly natural origin pines would be managed with a combination of thinning, removal of late succession competitors and an active fire research program. Natural origin pine forests in the Lakes States are considered to be a feature of high conservation value. This actively managed area would also be included as Papoose Creek Pines SNA to research the effects of fire on the ecosystem and to provide a comparative ecological reference for the adjacent are management by timber harvest alone.

CROG: 10AB
Biotic Inventory: 9
Draft Master Plan Area: 11
Native Community: Red and White Pine

#6 Rice Creek:

This 373 acre site features a large, diverse conifer swamp of white cedar, open bog, muskeg, upland hemlock stands, boreal rich fens, and Rice Creek. The site would be managed as a Peatland/Wetland Native Community Management Area. The passive management zone has been reduced to focus on the features of concern. The white cedar, boreal rich fens, old-growth relict hemlock stands, Keego Lake and Rice Creek (22 acres) itself would be passively managed, the remainder would see active management to promote maintenance of the

cover types while extending their rotation towards biological maximums. The passively managed area encompassing 435-acres would also be designated the Rice Creek SNA.

Biotic Inventory: 10
Draft Master Plan Area: 10
Native Community: Peatland Wetland (03)

#7 Day Lake:

The existing 209-acre SNA would remain and also continue to be managed as a Special Aquatic Management Area. The 400-foot no cut buffer, which is currently part of the SNA, would now be actively managed zone (99 acres) to promote long-lived tree species, such as white pine, while maintaining water quality by utilizing Best Management Practices for Water Quality (BMPs).

Draft Master Plan Area: 13
Native Community: Special Aquatic

#8 Trout River:

This 108-acre site features a slow, warm, hard water stream providing habitat for several rare species. The site would be passively managed below the high water mark as a Special Aquatic Native Community Management Area and also designated Trout River SNA. This is a special aquatic site that was not listed in the preferred alternative but added later in master plan team discussions.

Draft Master Plan Area: 12
Native Community: Special Aquatic

#9 Camp Lake and Pines:

The site features an ultrasoft water Camp Lake (65 acres), a small unnamed lake and the surrounding upland white and red pines. The site is a red and white pine Native Community Management Area with emphasis on allowing natural processes to predominate around the lake and more active management in the eastern portion of the area. An active fisheries research project in progress, which is testing the effects of adding woody debris to the lake. The 146-acre core is managed to passively allow natural processes to determine the structure of the uplands. The site would also be designated the Camp Lake and Pines SNA.

Biotic Inventory: 44
Draft Master Plan Area: 11
Native Community: Red & White Pine

10 Devine Lake and Mishonagon Creek:

This 1,041-acre site would be managed as a Special Aquatic area and also as a wilderness lake. The boundary was reduced from that presented in the preferred alternative to one narrowly focused on the features of concern, the hard water springs,

Appendix E: State Natural Areas (SNAs)

spring lake, cold water stream and the surrounding forested wetlands. The entire site would also be designated Devine Lake and Mishonagon Creek SNA to further recognize the unique attributes of the aquatic and wetland communities.

Biotic Inventory: 45
Draft Master Plan Area: 13
Native Community: Special Aquatic

#11 Black Tern Bog:

This existing 15-acre SNA would continue to be an SNA and be managed as a Special Aquatic Management Area. The uplands around the bog would not be included the SNA and would now be part of the Forest Production Area. BMPs would be utilized to assure water quality.

Draft Master Plan Area: 13
Native Community: Special Aquatic

#12 Trout Lake Conifer Swamp:

This existing 22-acre SNA is located at the south end of Trout Lake and would continue its designation under the proposed master plan. The area is managed as a Peatland Wetland Native Community Area.

#13 Allequash Lake and Pines:

This site would be managed as a Mixed Forest Native Community Management Area. The objective of this area would be old-growth characteristics and maintenance of closed canopy white pine and red oak forest. Most of the area would be actively managed to attain and enhance old oak and pine characteristics. The passive management zone focuses on the oldest white pine and the near shore habitat around the southwest arm of Allequash Lake. The passively managed area encompassing 265 acres of upland and the 133 acre southwest arm of Allequash Lake would also become the Allequash Lake SNA

CROG: 15AB
Biotic Inventory: 34
Draft Master Plan Area: 12
Native Community: Mixed Forest

#14 Lost Canoe:

This site contains a variety of old-growth sites and ranges from a mesic hemlock forest in the east to a dry red pine forest in the west which is a classic continuum of plant communities. The center of the site would be passively managed just as it is now, and the surrounding acres would receive more active management. The center portion going from the existing Escanaba Hemlocks State Natural Area through the isthmus between Lost Canoe and Escanaba, the entire shore of Palette Lake and the Stevenson Springs are would be a passively managed zone and also be Lost Canoe SNA. The site,

which encompasses 1,136 acres including 269 acres of water, would make an excellent place to study the dynamics of different forest types across a relative small area.

CROG: 13AB
Biotic Inventory: 31, 32, 33
Draft Master Plan Area: 12
Native Community: Mixed Forest

#15 Nixon Lake:

This 737-acre site features a shallow, soft water drainage lake (137 acre) and an extensive sedge meadow. The site would be managed as a Special Aquatic Native Community Management Area and also designated Nixon Lake SNA. This is a special aquatic site that was not listed in the preferred alternative but added later in master plan team discussions.

Draft Master Plan Area: 13
Native Community: Special Aquatic

#16 Johnson Lake Barrens and Springs:

This existing 198-acre barrens SNA would be managed using prescribed fire and brushing as the primary management techniques. This native community management area along with the 327-acre **(A) Garland Springs, Salsich Springs**, and the existing **(B) Goodyear Springs-East** State Natural Areas would be combined to create a Johnson Lake Barrens and Springs State Natural Area encompassing 1,077 acres. The uplands would be actively managed for the perpetuation of bracken grasslands. The soft water streams and soft water springs would be passively managed. Both uplands and wetlands would provide an ecological reference area to compare with other bracken grassland and stream management. The boundary of Goodyear Springs East was modified to more precisely feature the springs and adjoining wetlands, and the Siphon Springs portion of the natural area was removed and is now in forest production area.

Johnson Lake Barrens & Springs:

Biotic Inventory: 18
Draft Master Plan Area: 14
Native Community: Johnson Lake Barrens

Goodyear Springs:

Draft Master Plan Area 13
Native Community: Special Aquatic

Garland Salsich:

Draft Master Plan Area 13
Native Community: Special Aquatic

#17 Lake Alva Birch-Hemlock:

This site contains a relict old-growth stand of yellow birch and hemlock that are over 250-years old. The site would be managed as an ecological reference area in the Lake Laura Loamy Hills Native Community Management Area. The older

Appendix E: State Natural Areas (SNAs)

and least disturbed portions of the site encompassing 314-acres including 26 acres of water would be passively managed and also designated the Lake Alva Birch-Hemlock SNA. The remainder of the site would be managed to promote the old-growth character of the site and look for opportunities to manage for a forest dominated by large trees and diverse forest structure.

Biotic Inventory: 22

CROG: 4A

Draft Master Plan Area: 8

Native Community: Lake Laura Loamy Hills

#18 Lake Laura Hardwoods:

This site contains a relict old-growth stand of hemlock and northern hardwoods that are over 250-years old. The site would be managed as an ecological reference area in the Lake Laura Loamy Hills Native Community Management Area. The older and least disturbed portions of the site encompassing 852-acres including Salsich Lake (60 acres) would be passively managed and also designated the Lake Laura Hardwoods SNA. The remainder of the site would be managed to promote the old-growth character of the site and look for opportunities to manage for a forest dominated by large trees and diverse forest structure.

Biotic Inventory: 23

CROG: 2A

Draft Master Plan Area: 8

Native Community: Lake Laura Loamy Hills

#19 Aurora Lake:

This site combines portions of the existing Aurora Lake SNA, currently 250 acres, with Frank Lake and the Mary Davis Reis Bog. Because these areas are contiguous, it has been proposed that they be combined. The site would be managed as a Peatland/Wetland Native Community Management Area. The site would be managed passively in the wetlands and actively in the frost packet to keep it open. The boundary was significantly reduced to focus the management on the native communities of interest. Most of the upland forest would be actively managed for timber production area. The entire revised boundary of 834 acres including 301 acres would also be the Aurora Lake SNA.

Biotic Inventory: 26, 27, 28

Draft Master Plan Area: 8

Native Community: Peatland Wetland

#20 Plum Lake Hemlocks:

This site, currently 665 acres, contains a relict old-growth stand of hemlock that are over 250-years old. The site would be managed as an ecological reference area in the Lake Laura Loamy Hills Native Community Management Area. The older and least disturbed portions of the site encompassing 744-acres would be passively managed and also designated the Plum Lake Hemlocks SNA.

Biotic Inventory: 24

CROG: 3A

Draft Master Plan Area: 8

Native Community: Lake Laura Loamy Hills

#21 Bittersweet Lakes:

This site contains 180 to 220-year old red and white pine, 270-year old relict hemlock forest and mature northern hardwoods. The site contains the existing 568-acre Bittersweet Lakes SNA, and would now be managed as the Bittersweet Recreation Area featuring non-motorized recreation opportunities. The land management would maintain the old-growth forest primarily through passive management techniques. The relict old-growth forest of hemlock, white and red pine along with the existing SNA would be combined to form an expanded Bittersweet Lakes SNA encompassing 1,136 acres, including 288 water acres. The site would provide an unparalleled opportunity for research, education, and low intensity recreation among the oldest trees on the state forest.

Biotic Inventory: 38

CROG: 16AB

Draft Master Plan Area: 21

Bittersweet Non-motor Recreation Area

#22 Tomahawk Lake Hemlocks:

This 266-acres old-growth hemlock relict would be managed as a Hemlock/Northern Hardwoods Native Community Management Area using passive techniques. The entire site would also be designated the Tomahawk Lake Hemlocks SNA.

Biotic Inventory: 54

CROG: 33B

Draft Master Plan Area: 9

Native Community: Hemlock Hardwoods

Appendix E: State Natural Areas (SNAs)

#23 Two Lakes Oak-Pine Forest:

This site contains a mixed forest of mature red pine, white pine, and red oak. A windstorm leveled a portion of the site in 1999, and an integrated team determined that no salvage would take place and research plots would be established. The site would be managed as a Mixed Forest Native Community Management Area. The site was reduced in size to accommodate the legal access of adjacent landowners. The 112-acre no salvage area in the center would also become the Two Lakes Oak-Pine Forest SNA and the remainder of the site would be actively managed to promote old forest characteristics.

Biotic Inventory: 56
CROG: 30B
Draft Master Plan Area: 13
Native Community: Mixed Forest

#24 Wind Pudding Lake:

The proposed 340-acre site includes the existing 159-acre eastern basin of Wind Pudding Lake SNA, which currently has a no harvest buffer of 400-feet around the lake. The proposed management would have Wind Pudding Lake as a Special Aquatic Management Area and also an SNA. The uplands in the 181 acre buffer would be part of the SNA, and have active timber management to promote long-lived tree species, especially white pine, while assuring water quality by utilizing BMPs for Water Quality.

Biotic Inventory: 57
Draft Master Plan Area: 13
Native Community: Special Aquatic

#25 Big Swamp:

This site contains a vast peatland and upland sandy patches around the edge. The site would also be combined with site A (Swanson Lake), because they share the same wetlands. The size of the site has been reduced to more closely follow the wetland boundary on the east side. The Swanson Lake and Pines site is mostly wetland and the uplands would be managed as red pine/white native community. The remainder of the site would be managed as a Peatland/Wetland Native Community Management Area. The peatland of stunted spruce, cedar swamp and sedge meadow would be passively managed. About 32 acres of red and white pine would be actively managed through timber thinning and prescribed burning to achieve ecological goals. This 2,934-acre zone including 115 acres of water would also be designated Big Swamp SNA. The remainder of the Native Community Management Area would be managed through active timber management to achieve ecological goals.

Big Swamp

Biotic Inventory: 61
Draft Master Plan Area: 10
Native Community: Peatland Wetland

Swanson Lake

Biotic Inventory: 62
CROG: 32B
Draft Master Plan Area: 11
Native Community: Red & White Pine

#26 Rainbow Wetlands:

This site contains a large wetland complex covering 2,323 acres, including small islands of sand soils supporting pines and hardwoods. The area has been recently impacted by wind events that leveled most of the larger trees with accessible areas being salvaged. The site would be managed as a Peatland/Wetland Native Community Area. The boundary has been slightly reduced from that appearing in the preferred alternative. These wetlands would be passively managed and also designated the Rainbow Wetlands SNA.

Biotic Inventory: 60
Draft Master Plan Area: 10
Native Community: Peatland Wetland (06)

#27 Stone Lake Pines:

This proposed 199-acre addition to the original 65 acre SNA would contain a string of small islands in a wetland supporting 130-year old red pines. The site would continue to be passively managed as a Red Pine/White Pine Native Community Management Area and also be designated the Stone Lake Pines SNA.

Biotic Inventory: 65
Draft Master Plan Area: 11
Native Community: Red & White Pine

#28 Shallow Lake:

This 103-acre site features a shallow, soft, seepage lake (28 acres), providing habitat for several rare plant species. The lake and adjacent wetlands would be passively managed as a Special Aquatic Native Community Management Area and also designated Shallow Lake SNA. This is a special aquatic site that was not listed in the preferred alternative but added later in master plan team discussions.

Biotic Inventory: 64
Draft Master Plan Area: 13
Native Community: Special Aquatic

#29 High Lake Spruce Fir Forest:

This 40-acre site was established as a SNA in the early 1950's to recognize a forty acre stand of boreal forest. At that time, no other stands were known in the state. Since then, the spruce and fir component of the stand has been lost and the site no longer contains ecological criteria for which it was established. This stand will now be managed as a forest production area.

Appendix F: Natural Resources Used by Local Native American Tribes

NATURAL RESOURCES USED BY LOCAL NATIVE AMERICAN TRIBES

The Ojibwe¹ had long lived in the Lake Superior region (portions of modern-day Minnesota, Wisconsin, Michigan, and Canada) by the time European explorers first entered the area. At that time, the Ojibwe lived a semi-nomadic lifestyle, moving seasonally from camp to camp, harvesting from the earth (aki²) vital foods, medicines, utility supplies, and ceremonial items.

As more Europeans moved into the Lake Superior region in search of timber and minerals, the United States government obtained vast parcels of land from the Ojibwe through cession treaties. In many of these treaties, the Ojibwe retained the rights to hunt, fish, and gather in the ceded territories to meet economic, cultural, spiritual, and medicinal needs — in essence, to sustain their lifeway. Tribal negotiations for these rights were fastidious and purposeful, and only through the guarantee of these rights, did the tribes agree to sign the treaties. Today, these reserved usufructory rights are often referred to as treaty rights.

Treaties that reserved these rights include the Treaty of 1836, ceding land in Michigan's Upper and Lower Peninsulas and parts of the Upper Great Lakes; the Treaty of 1837, ceding land in north central Wisconsin and east central Minnesota; the Treaty of 1842 ceding land in northern Michigan and Wisconsin and the western part of Lake Superior; and the Treaty of 1854, ceding land in northeastern Minnesota and creating reservations for many Ojibwe tribes.

For many years following the ratification of these treaties, the Ojibwe continued to hunt, fish, and gather as always. However, over the years, as states passed various conservation laws, state game wardens enforced these laws against tribal members. Members exercising their treaty rights off-reservation within the ceded territories were frequently cited and convicted in state courts. Many members paid fines, endured the confiscation of their rifles and fishing gear, and suffered incarceration.

Though the Ojibwe have always believed in the continued existence of their treaty rights, it was not until the 1970's, as part of a general resurgence of tribal self-determination, that Ojibwe governments and their members more aggressively and more formally challenged state conservation laws and enforcement activities. These challenges gave rise to many federal and state court decisions which reaffirmed Ojibwe off-reservation treaty rights on public lands in the ceded territories³.

The courts confirmed the Ojibwe's understanding of their treaty rights: The treaties provide a "permanent" guarantee "to make a moderate living off the land and from the waters ... by engaging in hunting, fishing and gathering as they had in the past."⁴ In essence, the courts found the Ojibwe treaties to be legally binding agreements to be respected within the framework of the United States Constitution, which defines treaties as the "supreme law of the land."

In addition, the courts recognized that by reserving the rights to engage in hunting, fishing, and gathering, the Ojibwe also retained their sovereignty to regulate tribal members exer-



Appendix F: Natural Resources Used by Local Native American Tribes

cising these treaty rights. Sovereignty refers to the right of inherent self-government and self-determination. Thus, tribal self-regulation is a requisite of treaty rights implementation.

As the courts reaffirmed the Ojibwe's ceded territory treaty rights, a number of tribes⁵ in Michigan, Minnesota and Wisconsin chose to enhance their self-regulatory infrastructures through the formation of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC)...[GLIFWC] assists its member tribes with issues such as the application of tribal self-regulation within the off-reservation ceded territories, identification

and condition assessment of treaty resources, negotiations and consultation with state and federal government agencies regarding the management of treaty resources within the ceded territories, and litigation pertaining to the treaties of member tribes.

excerpted from Daniels and Gilbert 2002

Nontimber Forest Products in the United States

¹ There are several terms used in reference to the Ojibwe people. The Ojibwe people often call themselves Anishinaabe which in their language means Indian person or original people. The anglicized word for Ojibwe is Chippewa.

² Ojibwe language

³ See *People v. Jondreau*, 384 Mich 539, 185 N.W. 2d 375 (1971); *State of Wisconsin v. Gurnoe*, 53 Wis. 2d 390 (1972); *U.S. v. Michigan*, 471 F.Supp. 192 (W.D. Mich. 1979); *Lac Courte Oreilles v. Voigt (LCO I)*, 700 F. 2d 341 (7th Cir. 1983), cert. denied 464 U.S. 805 (1983); *Lac Courte Oreilles v. State of Wisconsin (LCO III)*, 653 F.Supp. 1420 (W.D. Wis. 1987); *Lac Courte Oreilles v. State of Wisconsin (LCO IV)*, 668 F.Supp. 1233 (W.D. Wis. 1987); *Lac Courte Oreilles v. State of Wisconsin (LCO V)*, 686 F.Supp. 226 (W.D. Wis. 1988); *Lac Courte Oreilles v. State of Wisconsin (LCO VI)*, 707 F.Supp. 1034 (W.D. Wis. 1989); *Lac Courte Oreilles v. State of Wisconsin (LCO VII)*, 740 F.Supp. 1400 (W.D. Wis. 1990); *Lac Courte Oreilles v. State of Wisconsin (LCO VIII)*, 749 F.Supp. 913 (W.D. Wis. 1990); *Lac Courte Oreilles v. State of Wisconsin (IX)*, 758 F.Supp. 1262 (W.D. Wis. 1991); *Lac Courte Oreilles v. State of Wisconsin (X)*, 775 F.Supp. 321 (W.D. Wis. 1991); *U.S. v. Bresette*, 761 F.Supp. 658 (D. Minn. 1991); *Mille Lacs Band v. State of Minnesota*, 861 F.Supp. 784 (D. Minn. 1994); *Mille Lacs Band v. State of Minnesota*, 952 F.Supp. 1362 (D. Minn. 1997); *Mille Lacs Band v. State of Minnesota*, 124 F.3d 904 (8th Cir. 1997); *State of Minnesota v. Mille Lacs Band*, 119 S.Ct. 1187 (1999).

⁴ LCO III, 653 F.Supp. 1420, 1426 (W.D. Wis. 1987).

⁵ GLIFWC's current member tribes include: in Wisconsin -- the Bad River Band of the Lake Superior Tribe of Chippewa Indians, Lac du Flambeau Band of Lake Superior Chippewa Indians, Lac Courte Oreilles Band of Lake Superior Chippewa Indians, Red Cliff Band of the Lake Superior Chippewa Indians, St. Croix Chippewa Indians of Wisconsin, and Sokaogon Chippewa Community of the Mole Lake Band; in Michigan -- Bay Mills Indian Community, Keweenaw Bay Indian Community, and Lac Vieux Desert Band of Lake Superior Chippewa Indians; and in Minnesota -- Fond du Lac Chippewa Tribe and Mille Lacs Band of Chippewa Indians.

